

What is claimed is:

1. A method for reducing biofilm in an aqueous system, comprising the steps of:
providing a mixture containing enzymes and surfactants, and
introducing the mixture to an aqueous system containing biofilm.

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2. The method of claim 1, wherein said mixture comprises enzymes from one or
more of the classes including esterases, lipases, proteases, glycosidases, cellulases, cellobiases,
and phosphatases.

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3. The method of claim 2, wherein said mixture comprises lysozyme.

15 4. The method of claim 2, wherein said mixture comprises esterase (C-4), esterase-

lipase (C-8), cystine arylamidase, chymotrypsin, beta galactosidase, beta glucuronidase, and
naphthol-AS-BI-phosphohydrolase.

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5. The method of claim 1, wherein said mixture comprises nonionic surfactants from
one or more of the classes including alkanolamides, amine oxides, block polymers, ethoxylated
primary and secondary alcohols, ethoxylated alkylphenols, ethoxylated fatty esters, sorbitan
derivatives, glycerol esters, and polymeric surfactants.

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6. The method of claim 5, wherein said mixture comprises a C₁₂-C₁₆ linear alcohol
ethoxylate surfactant.

25 7. The method of claim 1, wherein said mixture comprises anionic surfactants from

one or more of the classes including ethoxylated amines, ethoxylated amides, sulfosuccinates and derivatives, sulfates of ethoxylated alcohols, sulfates of alcohols, and polymeric surfactants.

8. The method of claim 7, wherein said mixture comprises a sodium alkyl ether sulfate surfactant.

9. The method of claim 1, wherein said mixture comprises the fermentation product of a yeast selected from the group consisting of *Saccharomyces cerevisiae*, *Kluyveromyces marxianus*, *Kluyveromyces lactis*, *Candida utilis* (Torula yeast), *Zygosaccharomyces*, *Pichia*, and *Hansanula*.

10. The method of claim 9, wherein said mixture further comprises one or more nonionic surfactants from the group comprising alkanolamides, amine oxides, block polymers, ethoxylated primary and secondary alcohols, ethoxylated alkylphenols, ethoxylated fatty esters, sorbitan derivatives, glycerol esters, and polymeric surfactants.

11. The method of claim 9, wherein said mixture further comprises one or more anionic surfactants from the group comprising ethoxylated amines, ethoxylated amides, sulfosuccinates and derivatives, sulfates of ethoxylated alcohols, sulfates of alcohols, and polymeric surfactants.

12. The method of claim 9, wherein said mixture further comprises a C₁₂-C₁₆ linear alcohol ethoxylate surfactant and a sodium alkyl ether sulfate surfactant.

25 13. The method of claim 12, wherein said fermentation product is present in said

mixture at a concentration of from about 5.0% by weight to about 60.0% by weight, and said mixture is added to the aqueous system to obtain a concentration by weight of the mixture of from about 0.1 part per million to about 25 parts per million.

5 14. The method of claim 12, wherein said fermentation product is present in said mixture at a concentration of from about 5.0% by weight to about 50.0% by weight, and said mixture is added to the aqueous system to obtain a concentration by weight of the mixture of from about 1 parts per million to about 5 parts per million.

10 15. The method of claim 1, wherein said aqueous system is a crossflow filtration system.

16. The method of claim 15 wherein said crossflow filtration system is a reverse osmosis system.

15 17. The method of claim 15, wherein said mixture comprises the fermentation product of a yeast selected from the group consisting of *Saccharomyces cerevisiae*, *Kluyveromyces marxianus*, *Kluyveromyces lactis*, *Candida utilis* (Torula yeast), *Zygosaccharomyces*, *Pichia*, and *Hansenula*.

20 18. The method of claim 17, wherein said mixture further comprises one or more nonionic surfactants from the group comprising alkanolamides, amine oxides, block polymers, ethoxylated primary and secondary alcohols, ethoxylated alkylphenols, ethoxylated fatty esters, sorbitan derivatives, glycerol esters, and polymeric surfactants.

19. The method of claim 17, wherein said mixture further comprises one or more anionic surfactants from the group comprising ethoxylated amines, ethoxylated amides, sulfosuccinates and derivatives, sulfates of ethoxylated alcohols, sulfates of alcohols, and polymeric surfactants.

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20. The method of claim 17, wherein said mixture further comprises a C₁₂-C₁₆ linear alcohol ethoxylate surfactant and a sodium alkyl ether sulfate surfactant.

21. The method of claim 20, wherein said fermentation product is present in said mixture at a concentration of from about 5.0% by weight to about 60.0% by weight, and said mixture is added to the reverse osmosis system to obtain a concentration by weight of the mixture of from about 0.1 part per million to about 25 parts per million.

22. The method of claim 20, wherein said fermentation product is present in said mixture at a concentration of from about 5.0% by weight to about 60.0% by weight, and said mixture is added to the reverse osmosis system to obtain a concentration by weight of the mixture of from about 1 parts per million to about 5 parts per million.

23. The method of claim 12, wherein said fermentation product is present in said mixture at a concentration of from about 5.0% by weight to about 60.0% by weight, and said mixture is added to the aqueous system to obtain a concentration by weight of the mixture of from about 1% to about 2%.

24. The method of claim 23 wherein the system temperature is 100° F or higher.

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25. The method of claim 24 comprising the additional step of removing the mixture containing enzymes and surfactants from the aqueous system within 10 minutes of said introducing step.